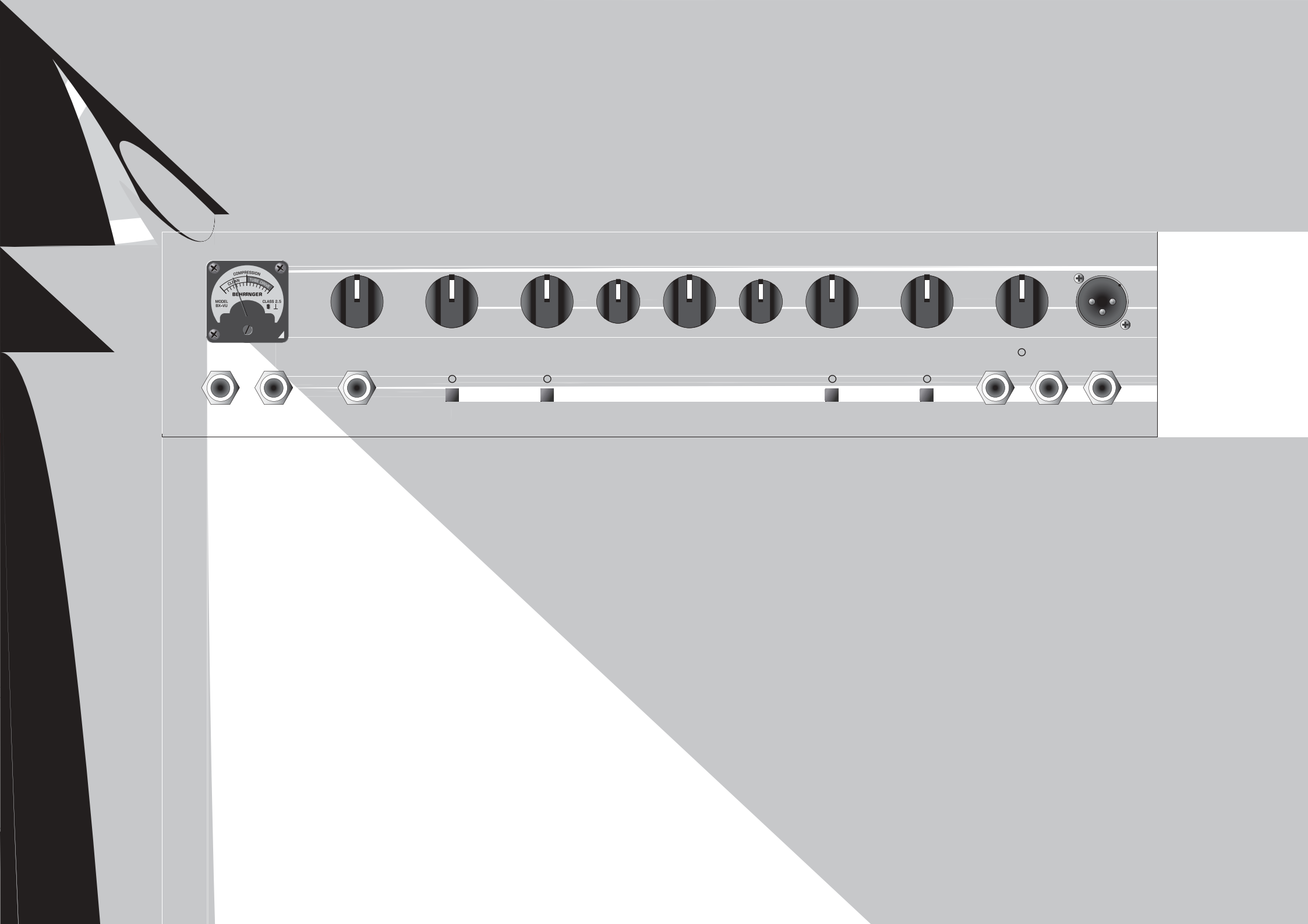

COMPRESSION
CLEAN
BEHRINGER
MODEL
8X-VU
CLASS 2.5

IMPORTANT SAFETY INSTRUCTIONS

GB

CAUTION: To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside; refer servicing to qualified personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure—voltage that may be sufficient to constitute a risk of shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

DETAILED SAFETY INSTRUCTIONS:

1) Read these instructions.

2) Keep these instructions.

3) Heed all warnings.

4) Follow all instructions.

5) Do not use this apparatus near water.

6) Clean only with dry cloth.

7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11) Only use attachments/accessories specified by the manufacturer.

12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

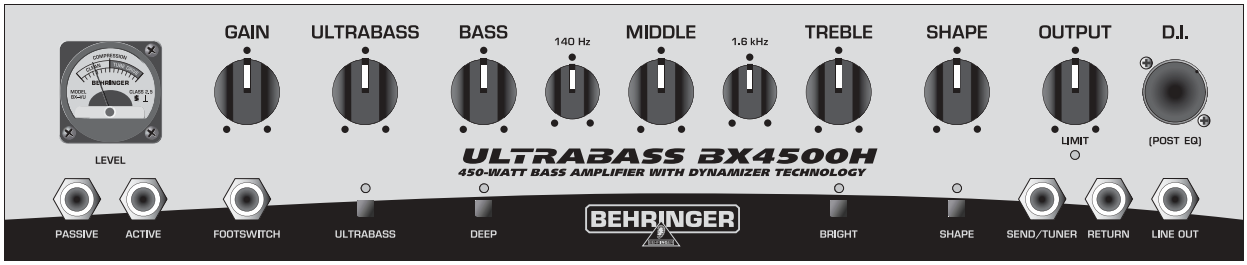
13) Unplug this apparatus during lightning storms or when unused for long periods of time.

14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15) CAUTION - These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions unless you are qualified to do so.

ULTRABASS

450-Watt Bass Amplifier Head with Shape Filter and Ultrabass Processor



GB

BX4500H

FOREWORD

Dear Customer,

Welcome to the team of ULTRABASS users and thank you very much for expressing your confidence in BEHRINGER products by purchasing the BEHRINGER BX4500H.

It is one of my most pleasant tasks to write this letter to you, because it is the culmination of many months of hard work delivered by our engineering team to reach a very ambitious goal: to present you with an outstanding bass workstation that gives you maximum flexibility and performance with its unique sound character and broad range of functions.

The task to design the new ULTRABASS certainly meant a great deal of responsibility, which we assumed by focusing on you, the discerning user and musician. It also meant a lot of work and night shifts to accomplish this goal. But it was fun, too. Developing a product usually brings a lot of people together, and what a great feeling it is when everybody who participated in such a project can be proud of what we've achieved.

It is our philosophy to share our joy with you, because you are the most important member of the BEHRINGER team. With your highly competent suggestions for new products you've greatly contributed to shaping our company and making it successful. In return, we guarantee you uncompromising quality as well as excellent technical and audio properties at an extremely favorable price. All of this will enable you to fully unfold your creativity without being hampered by budget constraints.

We are often asked how we can produce such high-grade devices at such unbelievably low prices. The answer is quite simple: it's you, our customers! Many satisfied customers means large sales volumes enabling us to get better conditions of purchase for components, etc. Isn't it only fair to pass this benefit back to you? Because we know that your success is our success, too!

I would like to thank all people whose help on "Project ULTRABASS" has made it all possible. Everybody has made very personal contributions, starting from the designers of the unit to the many staff members in our company and finally to you, the users of BEHRINGER products.

My friends, it's been worth the trouble!

Thank you very much,

Uli Behringer

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- **It should be pointed out that extreme output volumes may damage your hearing and/or your headphones. Turn down all LEVEL controls before you switch on the unit. Always set the volume at an appropriate level.**

1. INTRODUCTION

Congratulations! With the BX4500H you have acquired a pro-level amplifier from our BX bass amplifier series. This revolutionary bass amplifier top has many of the features of our successful BX1200. Our top goal when designing the BX4500H was to set *new* standards. In fact, the BX4500H is a bass amp that gives you a full set of features plus a comprehensive range of connection and expansion options. With this amp you'll certainly rattle the planet!

BEHRINGER is an audio engineering company that has been successfully developing products for studio and live applications for many years now. Our range of products includes microphones and a variety of 19" devices (compressors, enhancers, noise gates, tube processors, headphone amps, digital effects devices, DI boxes, etc.) as well as monitoring and P.A. speakers plus professional live and recording consoles. You will find all of our technical know-how combined in your BX4500H.

Flexibility has become a particularly important factor in the music business over the past few years. Modern bass players need to offer a broad range of sounds, but should still be able to play in different kinds of applications at short notice: home recording, studio, live concerts. For this reason, it has always been our prime concern to give you a bass amplifier that offers a complete set of useful functions, but can still be operated intuitively and quickly.

Additionally, the world of electric bass playing has changed: new basses, with five or six strings, are being launched all the time, there are effects devices and the desire to create one's own "unique" sound—which can only be achieved with innovative amplifiers. Our unique ULTRABASS BX4500H gives you pioneering sounds and power galore.

We have expanded our BX Series with this amplifier top to give you all the freedom you need when expanding your set-up. No matter which speakers or cabinets you prefer—with its superb sound, your BX4500H will bring some life into your speaker.

As technology advances, you've got to keep track of the latest technological breakthroughs to avoid falling by the wayside. Which is what we did, by continuously improving this bass amplifier and including many of your valuable suggestions.

Experience a new-generation bass amp with fascinating features:

- ▲ Astounding sound diversity through SHAPE filter and ULTRABASS sub-harmonics processor.
- ▲ Unbelievable punch through innovative DYNAMIZER preamp technology.
- ▲ More gain, but no distortion through built-in limiter.
- ▲ Optimum level metering through clearly visible VU meter.
- ▲ A 5-band EQ with additional "Deep" and "Bright" functions meets all requirements in terms of tone-shaping.
- ▲ Plenty of power plus a built-in DI output—even on big stages you'll cut a fine figure with your BX4500H.

This absolutely low-noise and indestructible bass amp represents the current state of the art.

The rugged enclosure of your ULTRABASS ensures that the unit will withstand rough handling on the road over many years.

1.1.1 Patented DYNAMIZER technology

When it comes to amplifying the signals delivered by electric instruments, you've got to separate the wheat from the chaff. Unlike mixed or mastered signals, electric instruments usually deliver extremely high signal peaks which, when raised in gain, produce nasty distortion. How an amplifier responds to these signal peaks can therefore be seen as one of its most essential quality features.

Many manufacturers use limiters preceding the power stage to limit dynamic signal peaks. However, the problem is the preamp, which is why we've equipped the BX4500H with our unique DYNAMIZER preamp circuitry that gives you a lively and punchy sound with signal peaks—even if the amp reaches its power limits. Extreme signal peaks are limited effectively while the average level and hence the power of the overall signal is raised. The sound gets more vivid and powerful in character, without any unmusical distortion. With its limiter in the power stage it is virtually impossible to overdrive the ULTRABASS BX4500H.

1.2.1 Shipment

Your BX4500H was carefully packed at the factory and the packaging is designed to protect the unit from rough handling. Nevertheless, we recommend that you carefully examine the packaging and its contents for any signs of physical damage that may have occurred during transit.

- ☐ **If the unit is damaged, please do not return it to BEHRINGER, but notify your dealer and the shipping company immediately, otherwise claims for damage or replacement may not be granted. Shipping claims must be made by the consignee.**

1.2.2 Initial operation

Be sure that there is enough space around the unit for cooling and please do not place the ULTRABASS on high temperature devices such as radiators etc. to avoid overheating.

- ☐ **Before you connect your ULTRABASS to the mains, please make sure that your local voltage matches the voltage required by the unit:**

The fuse holder on the female mains connector has 3 triangular markings, with two of these triangles opposing each other. The ULTRABASS is set to the operating voltage printed next to these markers and can be set to another voltage by turning the fuse holder by 180°. **CAUTION: This instruction does not apply to export models exclusively designed e.g. for 120 V operation!**

- ☐ **If you set the unit to a different mains voltage, be sure to use a fuse of the correct type and rating. Please refer to the "SPECIFICATIONS" for details.**

- ☐ **Blown fuses must be replaced by fuses of the same type and rating! Please refer to the "SPECIFICATIONS" for details.**

The mains connection of the BX4500H is made by using the enclosed mains cable and a standard IEC receptacle. It meets all of the international safety certification requirements.

- ☐ **Please make sure that all units have a proper ground connection. For your own safety, never remove or disable the ground conductor from the unit or of the AC power cord.**

1.2.3 Online registration

Please do remember to register your new BEHRINGER equipment right after your purchase by visiting www.behringer.com (alternatively www.behringer.de) and kindly read the terms and conditions of our warranty carefully.

Should your BEHRINGER product malfunction, our goal is to have it repaired as quickly as possible. To arrange for warranty service, please contact the retailer from whom the equipment was purchased. Should your BEHRINGER dealer not be located in your vicinity, you may directly contact one of our subsidiaries. Corresponding contact information is included in the original equipment packaging (Global Contact Information/European Contact Information). Should your country not be listed, please contact the distributor nearest you. A list of distributors can be found in the support area of our website (www.behringer.com).

Registering your purchase and equipment with us helps us process your repair claims quicker and more efficiently.

Thank you for your cooperation!

2. CONTROL ELEMENTS

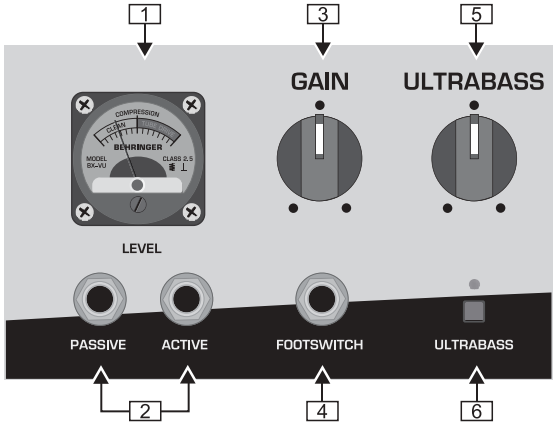


Fig. 2.1: BX4500H front panel (section 1)

1 The *LEVEL* VU meter reads the level that is applied to the preamp circuitry of the BX4500H.

□ **If the GAIN control 3 is set fully counterclockwise, the VU meter reads the input level only. Selecting "Active" 2 instead of "Passive" is recommended if the input level appears too high (in the right-hand third of the VU meter). Use the GAIN control to set the amplifier properly (so that the meter is in the mid region). The overall volume can be adjusted with the OUTPUT control 16.**

2 These are the inputs for your electric bass guitar. The *PASSIVE* jack is for passive basses, the *ACTIVE* jack for active instruments with high output levels. The ACTIVE jack features 10 dB less gain.

3 Use the *GAIN* control to determine the input gain on your BX4500H.

4 Connect your footswitch to the *FOOTSWITCH* jack, so as to control the sub-harmonics processor and SHAPE filter.

5 With the sub-harmonics processor switched on (see 6) you can add ultra-low bass frequencies to your sound by turning the *ULTRABASS* control (see chapter 5).

6 Press the *ULTRABASS* switch to enable the sub-harmonics processor: The LED above the switch lights up.

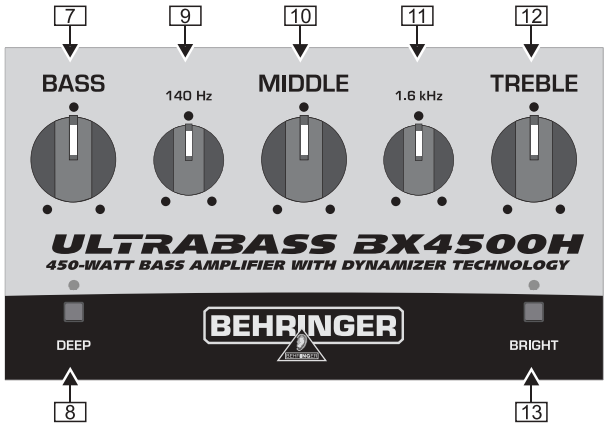


Fig. 2.2: BX4500H front panel (section 2)

7 The *BASS* control in the EQ section allows you to boost or cut the bass frequencies at approx. 50 Hz.

8 Press the *DEEP* switch to add low frequencies (ranging from 30 - 200 Hz) to your bass sound. When the DEEP function is switched on, the LED above the switch lights up.

9 This control governs the upper bass-frequency range at approx. 140 Hz.

10 The *MIDDLE* control allows you to boost/cut the low midrange frequencies at approx. 500 Hz.

11 This control raises/lowers the high midrange frequencies at approx. 1.6 kHz.

12 The *TREBLE* control governs the high-frequency range on your BX4500H at approx. 7.5 kHz.

13 Use this switch to enable/disable the *BRIGHT* effect, which adds some brilliance to the treble frequencies in the range from 2 - 20 kHz. When the BRIGHT function is on, its respective LED lights up.

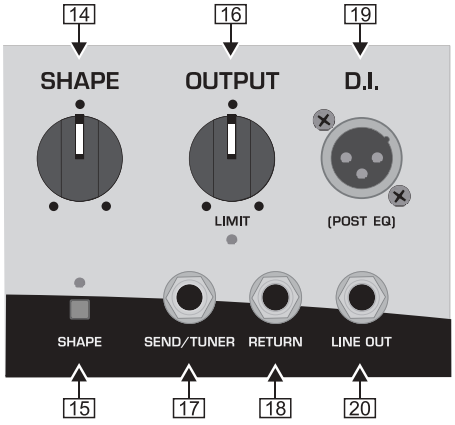


Fig. 2.3: BX4500H front panel (section 3)

14 When you enable the SHAPE filter with switch 15, you can use the *SHAPE* control to modify the filter sound. The filter position is adjustable in the range from 120 Hz - 1.2 kHz.

15 The *SHAPE* switch activates the SHAPE filter. When the filter is on, the LED above the switch lights up.

16 Use the *OUTPUT* control to determine the overall volume of your BX4500H.

□ **When the built-in limiter is activated, the LED below the OUTPUT control lights up.**

17 Connect the *SEND/TUNER* output to the input of your effects device, for example, our proven multi-effects processor BEHRINGER VIRTUALIZER PRO DSP2024P. This output can also be used to connect your tuner.

18 Connect the *RETURN* jack to the output of your effects device. Since the BX4500H features a serial effects path, the mix ratio must be set on your effects device.

19 Use the balanced *D.I.* XLR output to feed the audio signal from your ULTRABASS to an external mixing console. The D.I. signal is wired post-EQ.

20 Use the *LINE OUT* jack to connect your BX4500H to a mixing console that has no balanced inputs and/or to provide a signal that is independent of all settings adjusted on the BX4500H.

- **The LINE OUT output is wired post effects loop 17 & 18 and can also be used to feed the output signal of your BX4500H to an external bass amp.**

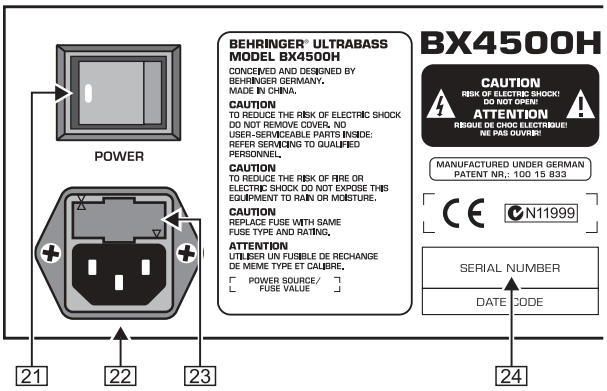


Fig. 2.4: BX4500H rear panel (section 1)

21 Use the *POWER* switch to switch the BX4500H on or off. You should always make sure that the POWER switch is in the “Off” position when initially connecting the unit to the mains.

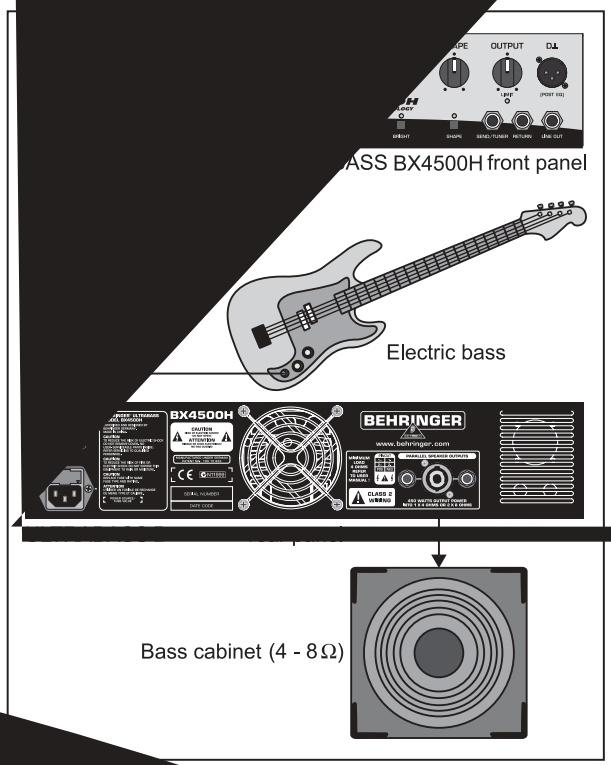
To disconnect the unit from the mains, pull out the main cord plug. When installing the product, ensure that the plug is easily accessible. If mounting in a rack, ensure that the mains can be easily disconnected by a plug or by an all-pole disconnect switch on or near the rack.

- **Please note: Merely switching the unit off does not mean that it is fully disconnected from the mains. When not using the unit for prolonged periods of time, please unplug the unit’s power cord from the power outlet.**

22 *MAINS CONNECTION*. Use the power cord supplied with the unit to connect it to the mains.

23 *FUSE HOLDER/VOLTAGE SELECTOR*. Before connecting the unit to the mains, make sure that the voltage setting matches your local voltage. A blown fuse should only be replaced by a fuse of the same type and rating. On some units, the fuse holder can be switched to one of two positions, i.e. 230 V and 120 V. When operating the unit outside Europe at 120 V, a higher fuse rating is required.

24 *SERIAL NUMBER*.



4. SHAPE FUNCTION

The SHAPE function on your BX4500H provides a revolutionary type of filter that you can use to modify your bass sound in full detail. The filter allows you to shape your sound—which is a must for bass players today. Extreme filter settings will give your bass sound more power, for example:

You want to play a live bass solo but the sound doesn't cut through. The solo should stand out, rather than being drowned. Set up a solid basic sound plus a very distinctive solo sound using the SHAPE filter. Connect your footswitch to control the SHAPE filter.

The SHAPE filter is a bargain when you are using two different bass guitars. Maybe you want to change from a jazz bass to a fretless bass, and vice versa—two instruments with a completely different sound. During gigs you often lack the time to set up your amp for a different instrument, so you'll be happy to have a BX4500H, because you can use the SHAPE filter for your fretless sound, and the basic sound for the jazz bass.

5. ULTRABASS FUNCTION

Extremely low bass sounds playing one octave below the lowest available bass guitar frequency are quite trendy in current music productions. Often, you can do this in studios only, because most bass amplifiers have no sub-harmonics function. Not so with your BX4500H: the ULTRABASS processor gives you the ultimate tool to shape up-to-date sounds.

You'll be surprised how deep your bass can sound with the ULTRABASS function of your BX4500H. Extreme settings can be particularly interesting if you want to give your sound some flavor in the treble range. By the way: when you use the SHAPE filter set to a low cut-off frequency (which is a nice setting for growling sounds), but feel that there's not enough power in the bass range, the sub-harmonics processor will be there to help you: even though the sound is still growling, now it has much more depth.

The ULTRABASS function can easily be switched on and off via the supplied footswitch. This allows you to fine-tune certain passages only.

6. INSTALLATION

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The mains connection is made by using the enclosed mains cable and a standard IEC receptacle. It meets all of the international safety certification requirements.

- **Please make sure that all units have a proper ground connection. For your own safety, never remove or disable the ground conductor of the unit or of the AC power cable.**

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□□□□□□□□□□□□□□□□□□□□

The BEHRINGER ULTRABASS is equipped with mono phone jacks, except for the D.I. output which is on a balanced XLR connector. The speaker jacks are on 1/4" TS and professional speaker connectors (compatible to Neutrik® Speakon®).

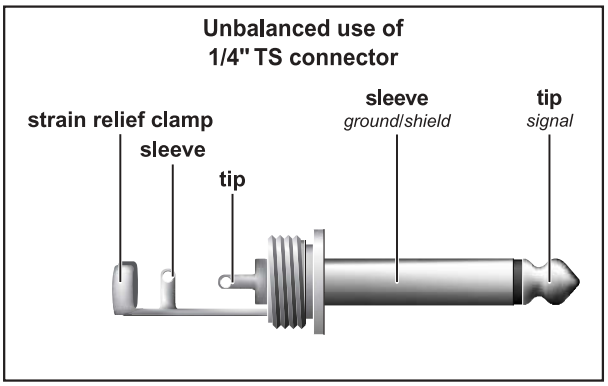


Fig. 6.1: 1/4" TS connector

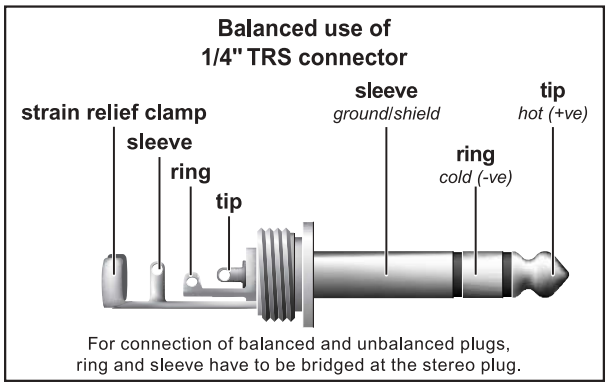
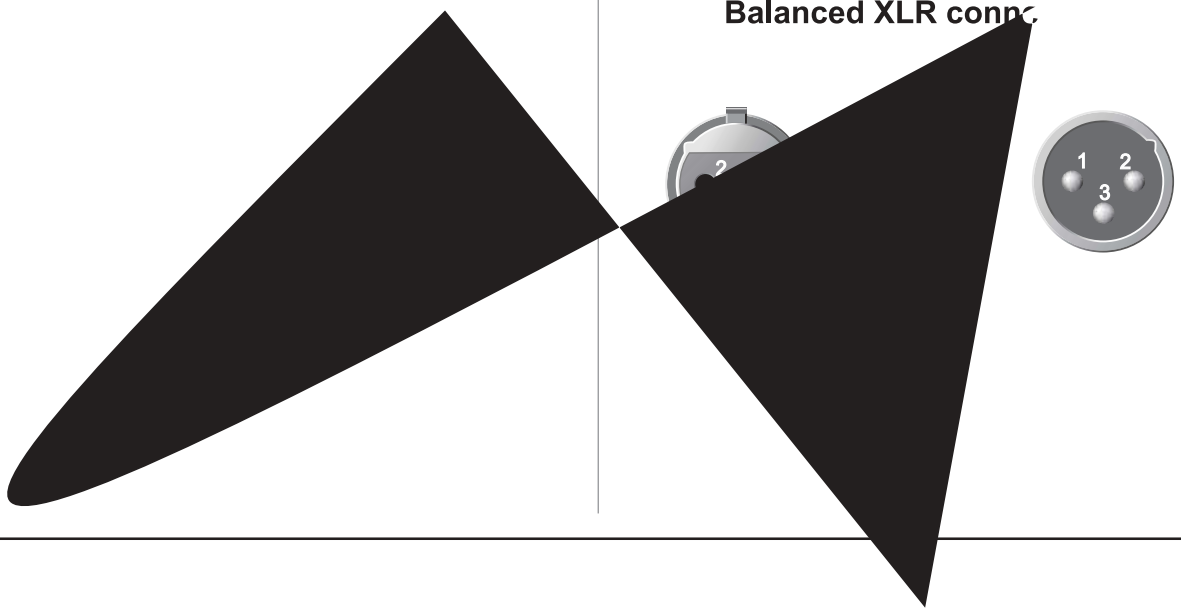


Fig. 6.2: 1/4" TRS connector



8. WARRANTY

§ 1 OTHER WARRANTY RIGHTS AND NATIONAL LAW

1. This warranty does not exclude or limit the buyer's statutory rights provided by national law, in particular, any such rights against the seller that arise from a legally effective purchase contract.

2. The warranty regulations mentioned herein are applicable unless they constitute an infringement of national warranty law.

§ 2 ONLINE REGISTRATION

Please do remember to register your new BEHRINGER equipment right after your purchase by visiting www.behringer.com (alternatively www.behringer.de) and kindly read the terms and conditions of our warranty carefully.

Registering your purchase and equipment with us helps us process your repair claims quicker and more efficiently.

Thank you for your cooperation!

§ 3 WARRANTY

1. BEHRINGER (BEHRINGER International GmbH including all BEHRINGER subsidiaries listed on the enclosed page, except BEHRINGER Japan) warrants the mechanical and electronic components of this product to be free of defects in material and workmanship for a period of one (1) year* from the original date of purchase, in accordance with the warranty regulations described below. If the product shows any defects within the specified warranty period that are not excluded from this warranty as described under § 5, BEHRINGER shall, at its discretion, either replace or repair the product using suitable new or reconditioned parts. In the case that other parts are used which constitute an improvement, BEHRINGER may, at its discretion, charge the customer for the additional cost of these parts.

2. If the warranty claim proves to be justified, the product will be returned to the user freight prepaid.

3. Warranty claims other than those indicated above are expressly excluded.

§ 4 RETURN AUTHORIZATION NUMBER

1. To obtain warranty service, the buyer (or his authorized dealer) must call BEHRINGER (see enclosed list) during normal business hours **BEFORE** returning the product. All inquiries must be accompanied by a description of the problem. BEHRINGER will then issue a return authorization number.

2. Subsequently, the product must be returned in its original shipping carton, together with the return authorization number to the address indicated by BEHRINGER.

3. Shipments without freight prepaid will not be accepted.

§ 5 WARRANTY REGULATIONS

1. Warranty services will be furnished only if the product is accompanied by a copy of the original retail dealer's invoice. Any product deemed eligible for repair or replacement under the terms of this warranty will be repaired or replaced.

2. If the product needs to be modified or adapted in order to comply with applicable technical or safety standards on a national or local level, in any country which is not the country for which the product was originally developed and manufactured, this modification/adaptation shall not be considered a defect in materials or workmanship. The warranty does not cover any such modification/adaptation, irrespective of whether it was carried out properly or not. Under the terms of this warranty, BEHRINGER shall not be held responsible for any cost resulting from such a modification/adaptation.

3. Free inspections and maintenance/repair work are expressly excluded from this warranty, in particular, if caused by improper handling of the product by the user. This also applies to defects caused by normal wear and tear, in particular, of faders, crossfaders, potentiometers, keys/buttons, tubes, guitar strings, illuminants and similar parts.

4. Damages/defects caused by the following conditions are not covered by this warranty:

- ▲ improper handling, neglect or failure to operate the unit in compliance with the instructions given in BEHRINGER user or service manuals.
- ▲ connection or operation of the unit in any way that does not comply with the technical or safety regulations applicable in the country where the product is used.
- ▲ damages/defects caused by force majeure or any other condition that is beyond the control of BEHRINGER.

5. Any repair or opening of the unit carried out by unauthorized personnel (user included) will void the warranty.

6. If an inspection of the product by BEHRINGER shows that the defect in question is not covered by the warranty, the inspection costs are payable by the customer.

7. Products which do not meet the terms of this warranty will be repaired exclusively at the buyer's expense. BEHRINGER will inform the buyer of any such circumstance. If the buyer fails to submit a written repair order within 6 weeks after notification, BEHRINGER will return the unit C.O.D. with a separate invoice for freight and packing. Such costs will also be invoiced separately when the buyer has sent in a written repair order.

§ 6 WARRANTY TRANSFERABILITY

This warranty is extended exclusively to the original buyer (customer of retail dealer) and is not transferable to anyone who may subsequently purchase this product. No other person (retail dealer, etc.) shall be entitled to give any warranty promise on behalf of BEHRINGER.

§ 7 CLAIM FOR DAMAGES

Failure of BEHRINGER to provide proper warranty service shall not entitle the buyer to claim (consequential) damages. In no event shall the liability of BEHRINGER exceed the invoiced value of the product.

* Customers in the European Union please contact BEHRINGER Germany Support for further details.

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